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ABSTRACT

The identification of learning disabilities (LD) in preschoolers in inclusive settings presents a number of obstacles related to the federal definition in the reauthorized Individuals with Disabilities Education Act (IDEA). This definition appears to emphasize school performance, which is not an appropriate measure for preschool-age children because of natural variability in development and the lack of formal school learning. This paper identifies possible precursors and characteristics of preschool children which can predict learning problems at school age, techniques of functional assessment for busy teachers of inclusive classes, and relevant interventions. The paper asserts that rather than focusing on academic performance, evaluation should determine whether there are specific delays or deviations in the developmental domains which include the social-emotional, adaptive, motor, communication, and cognitive areas. The most common characteristics of LD at preschool age are: age inappropriate hyperactivity, impulsivity, distractibility, inattention, disinhibition, disorganization, speech/language delays, auditory processing delay, visual processing difficulties, short- and long-term memory delays, social-emotional problems, and awkwardness in gross and fine motor skills. Assessment of such behavior by teachers should be functional, able to be performed during daily routines. Such assessment includes curriculum based measurements, play assessment, and portfolios. The paper concludes by describing interventions in the developmental domains of behavior, speech and language, auditory and visual processing, cognitive, motor-adaptive, and social-emotional. Contains 46 references. (EV)

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Precursors of Learning Disabilities in the Inclusive Preschool

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Running head: Precursors of Learning Disabilities

Abstract

This article identifies possible precursors or characteristics of learning disabilities at preschool age. These precursors are delays in the developmental areas including cognitive, communication and language, social-emotional, adaptive, and motor domains. The preschoolers display uneven developmental patterns in which some areas could be over age or above while others are below average. Techniques of functional assessment such as curriculum based measurement (CBA), play assessment, and portfolios are described for use by busy teachers of inclusive classes. Then relevant interventions are proposed which can be implemented within daily preschool routines and activities.

Precursors of Learning Disabilities in the Inclusive Classroom

The identification of learning disabilities (LD) in preschoolers in inclusive settings presents a number of obstacles related to the federal definition in the reauthorized Individuals with Disabilities Education Act (IDEA). A partial summary of this definition is that "the term specific learning disability means those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations" (Federal Register, December 29, 1977, p. 65083).

The definition appears to emphasize school performance (Lowenthal, 1996). School achievement also is stressed in the operational part of the definition which states that a severe discrepancy exists between a student's ability or potential for learning and her low level of achievement (Lerner, 1997). The measurement of school achievement is not appropriate at preschool age because the children have not been exposed to formal school learning. In addition, although the measurement of potential is possible in early childhood, it is not very reliable. One reason for this unreliability is that mental development occurs in rapid spurts at preschool ages (2 to 6 years). Therefore, the measurement of intelligence can vary within a short span of time (Smith, 1994). Another reason for this unreliability is that developmental delays at a young age may be just a matter of timing related to variable rates of maturation. The delays could disappear by the time the children enter kindergarten (Lerner, Lowenthal & Egan, 1998). This article identifies possible precursors and characteristics of preschool children which can predict learning problems at school age,

techniques of functional assessment for busy teachers of inclusive classes, and relevant interventions.

Identification of Precursors of LD (PLD) in Early Childhood

If the definition of LD in IDEA does not appear appropriate for preschoolers, how best can we identify PLD and its characteristics at this age? Instead of focusing on academic performance, we can evaluate whether there are specific delays or deviances in the developmental domains which include the social-emotional, adaptive, motor, communication, and cognitive areas. The youngsters display uneven developmental patterns. Some areas could be average or above while others could be below average. There are peaks of high performance and valleys of low performance in development. Instead of labeling the preschoolers as LD, they can be identified by a noncategorical label such as developmentally delayed. Teachers then can concentrate on planning functional assessments and interventions for these children rather than on the identification of their exact disabilities (Smith, 1994). Another benefit of a noncategorical classification is that it can eliminate a self-fulfilling prophecy in which teachers and caretakers expect less of the preschoolers labeled LD. Some studies and literature have concluded that children tend to live up to these lower expectations and not be as successful as they could be (Brophy & Good, 1996; Lerner, 1997).

When the youngsters reach kindergarten age, it becomes easier to diagnose LD. The children are expected to demonstrate school readiness skills. These include the ability to listen and follow directions, the motivation to learn, independence in work habits and in adaptive behaviors such as dressing, eating, and toileting, an age appropriate attention span and self-regulation of behaviors, and readiness skills in reading, math, and written expression. At kindergarten, common predictors of academic success are: naming and reciting alphabet letters in sequence, identifying words which rhyme, identifying the sounds and number of symbols in words, synthesizing sounds into words, naming colors, acquiring

an age appropriate vocabulary, writing one's name, recognizing and counting numbers, copying designs, developmentally appropriate memory skills, and general knowledge (Merzenick, Jenkins & Tallal, 1996; Lyon, 1996; Lerner, Lowenthal & Egan, 1998).

Frequent Characteristics of Preschoolers with PLD

Early childhood personnel need to be aware of the most common characteristics of LD at preschool age. These include: age inappropriate hyperactivity, impulisivity, distractibility, inattention, disinhibition, disorganization, speech/language delays, auditory processing delay, visual processing difficulities, short and long term memory delays, social-emotional problems, and awkwardness in gross and fine motor skills (Cook, Tessier & Klein, 1996). Each of these characteristics now are described in more detail.

The first characteristic is hyperactivity which is a primary symptom of both PLD and Attention Deficit Disorders (ADD). Often these two conditions exist together and have a co-morbidity of approximately 30 % (Green, 1996). Hyperactive children often are described as acting as if driven by motors, running and climbing about excessively, seem to be always in constant motion, fidget and squirm when sitting, and make loud noises. According to Barkley (1995), the main problem for hyperactive youngsters is that they cannot regulate or manage their activity levels to meet the demands of the moment.

Implusivity is a second characteristic of PLD. Impulsive children tend to blurt out answers before their caretakers have finished the questions. The impulsivity limits the preschoolers' awareness of the consequences of their actions. They tend to have problems inhibiting their responses to immediate events and do not reflect before acting. The youngsters also find it difficult to share and take turns with their peers in games (Howard, William, Port & Lepper, 1997). Others may view their impulsivity and disinhibition as intrusive, rude, and insensitive. These problems often result in unpopularity with their peers and adults (Lerner, Lowenthal & Egan, 1998; Margalit, 1998).

Age inappropriate distractibility and inattention are third and fourth symptoms of PLD and ADD (Barkley, 1995; Lerner, Lowenthal & Lerner, 1995). Children with these behaviors appear to be distracted by their own thoughts as well as by the actions of others. A number of research studies also demonstrate that attention problems in early childhood tend to predict irresponsible behaviors in adulthood (Achenbach, Howell, McConaughy & Stanger, 1995; Achenbach & McConaughy, 1996). A partial summary of the definition of inattention in the Diagnostic and Statistical Manual of Mental Disorders-IV (American Psychiatric Association, 1993) is the following:

> Inattention: At least six of the following symptoms of inattention which have persisted for at least six months that is maladaptive and inconsistent with the developmental level:
>
> 1. Often fails to give close attention to details or makes careless mistakes.
> 2. Often has difficulty sustaining attention in tasks or play activities.
> 3. Often does not seem to listen.
> 4. Often does not follow instructions and fails to finish schooling and chores.
> 5. Often has difficulty organizing tasks.
> 6. Often avoids tasks that require sustained mental effort.
> 7. Often loses things.
> 8. Often is distracted by extraneous stimuli.
> 9. Often is forgetful.

Caretakers and teachers of young children provide examples of these symptoms in their descriptions of the preschoolers' behaviors such as "the children do not listen, often lose things, need a lot of supervision, constantly shift from one activity to another, and do not finish what they start." Reasons for this inattention include: the preschoolers with PLD and

ADD become bored with activities much faster than their peers, and they frequently are attracted to novel stimuli which results in distractibility.

Other characteristics of PLD are: disorganization, speech and language delays, the predominance of physical and non-verbal communication such as hitting, tantrums, crying and emitting loud noises, auditory and visual processing difficulties, delays in short term and long term memories, social-emotional problems, and awkwardness in fine and gross motor skills (Ingersol, 1995; Umansky & Hooper, 1998). The child who is disorganized often cannot plan ahead, is confused about the sequence of routine activities, and loses more clothes, toys, and school materials than typical peers. Speech and language delays include: difficulties in developmentally appropriate listening and speaking skills, lack of age appropriate vocabularies, and problems in syntax, articulation, and pragmatics which concerns the use of language in social situations. The predominance of non-verbal communication can be due to the delays in the acquisition of verbal language skills.

Visual and auditory processing delays are demonstrated in children who can see and hear but cannot interpret the sensations appropriately. The preschooler with auditory processing difficulties may not recognize sounds in the environment or differentiate sounds in words. The child with visual processing problems may not be able to sort objects by size, color, or shape or interpret pictures accurately. Lags in short and long term memory abilities can result in delayed acquisition of facts and general knowledge. Delays in the social-emotional area make it difficult for preschoolers with PLD to regulate their emotions and develop friendships with their peers. Awkward fine motor skills often result in the child's avoidance of puzzles, building games, art projects, and cutting activities. Awkwardness in the gross motor area is observed in preschoolers who have difficulties with walking, jumping, hopping, running, skipping, throwing, and catching skills (Lowenthal, 1996).

Functional Methods of Assessment in the Inclusive Preschool

In order to assess the strengths and limitations of children with PLD, it is necessary for busy preschool teachers of inclusive classes to have functional methods of assessment. Standardized assessment often is not possible because of time constraints and the necessity of individualized testing. Assessments that can be performed during daily routines and activities are useful and can lead to relevant interventions. Some common examples are curriculum based measurements, play assessment, and authentic assessment in the form of portfolios. The three types of assessment now are described.

Curriculum based assessment (CBA). CBA is different from norm-referenced measurement because it does not compare preschoolers with their peers. Instead CBA compares the child's performance to expected performance on curricular objectives. The concern in CBA is not how the child performs in relation to the other children but in determining what curricula objectives are appropriate for the youngster to master next (Meisels, 1994; Greenspan & Meisels, 1996). In CBA, there is a close link between assessment and intervention (Jones, Southern & Brigham, 1998). Task analysis is used in CBA to sequence long term goals into small steps which taught one by one to the preschoolers until the goals are mastered. Some commonly used CBA instruments are the Brigance Inventory of Early Development-Revised (Brigance, 1991), The Carolina Curriculum for Preschoolers (Johnson-Martin, Attermeir & Hacker, 1990), HELP for Preschoolers (VORT Corporation, 1995), and The Evaluation and Programming System (AEPS) for Infants and Children (Bricker & Waddell, 1996).

A recent CBA instrument developed especially for preschoolers with PLD and other special needs is On Track (Neilsen, van den Pol, Guidry, Keeley & Honzel, 1994). On Track is designed to expedite the assessment process for teachers of inclusive classes. This instrument evaluates all domains of development including the cognitive communication,

adaptive, social-emotional, and physical areas. All assessment is done in routine activities of the preschool so that the teacher need not plan extra sessions. The curriculum section consists of Planning Sheets, Teaching Records, and Progress Reports. All these materials are formatted to make them easy to use, see, and share. Families can contribute to the assessment by completing the optional Family Interview Form, by prioritizing the skills they want their youngsters to acquire, and by reporting on observations of their behaviors (Bagnato, Neisworth, and Munson, 1997). On Track and the other CBA measures described appear to be practical tools for assessment in the inclusive preschool.

Play-based Assessment. Play-based assessment is another useful, informal technique of measurement. A model of this type of assessment is called Transdisciplinary Play-Based Assessment (TPBA) (Linder, 1993). TPBA can be used for both typical youngsters and those with special needs such as PLD. TPBA assesses the following: cognitive, social-emotional, communication/language, and sensorimotor domains of development through observations of child-directed play interactions (Bagnato, Neisworth & Munson, 1997; Lerner, Lowenthal & Egan, 1998). In TPBA, the team of related service personnel, the regular classroom teacher, the special educator, and the family obtain information about the child through their observations during free play. Advantages of TPBA include: the assessment is done during play, a natural, non-threatening activity for young children, and there are observation guidelines for all areas of development. After the TPBA, the team meets to share their observations, to decide on the eligibility of the child for special education, and to plan the IEP when necessary.

Portfolio Evaluation. The third type of assessment is the portfolio which is an example of authentic evaluation performed in real life situations such as in the inclusive early childhood class, home, or child care settings (Wetherby& Prizant, 1996). Rather than administering tests, the assessor looks at a collection of the preschooler's work and play samples arranged

into portfolios. The purposes of the portfolios are: to document progress over time, to demonstrate learning styles, and to communicate with families and professionals (Arter & Spandel, 1991). The contents of the portfolio are collected by early childhood personnel and families. These contents include: art work, photographs of creative constructions such as block buildings, videotapes depicting learning center and large group activities, and audiotapes demonstrating language and communication development. Advantages of the portfolio as a means of evaluation are that the children can contribute to the assessment process through selecting projects of their own choices, and the assessment becomes a meaningful learning process (Meisels, 1994).

Relevant Interventions in the Preschool Class

Important benefits of these three types of assessments are that they lead directly to interventions for PLD in the inclusive preschool (Greenspan & Meisels, 1996). Early interventions are important as they may prevent delays from occurring or lessen their severity. The interventions now described are for the following developmental domains: behavioral, speech an language, auditory and visual processing, cognitive, motor adaptive self-help, and social-emotional.

Behavioral Interventions

Behavioral management techniques and interventions help preschoolers who are hyperactive, inattentive, and distractible to better regulate their behaviors and to inhibit their impulsive responses. Positive guidance approaches in the inclusive class include: anticipating and planning ahead such as providing a system for sharing popular toys to avoid possible conflicts, helping children understand the consequences of their actions such as removing toys when mishandled, limiting the choices available to avoid confusion, and redirecting to other favorite activities to avoid restlessness and inattention (Dodge & Colker, 1992).

Important principles of behavioral management techniques for children with PLD are variety, routine, brevity, an orderly environment, preferential seating, and directions in small groups (Jones,1996). A variety of novel activities and toys help to sustain attention and prevent misbehaviors. The youngsters tend to get more bored with repetitions when compared to their typical peers and are attracted to novel stimuli, materials, and events (Zentall, 1993). Instead of rote memory activities, games can be used when repetition is needed. Routine and structure assist children to anticipate and plan ahead. Another use of routine is to smooth transition times when there are changes of activities. The structure of a consistent schedule enables children to know what is coming next and prevents misbehavior caused by confusion and uncertainty.

Brevity is suggested in large group activities such as circle time, music, and story reading. Frequent but short large group activities result in more attention and learning (Jones, 1996). An orderly environment is essential for preschoolers with PLD to organize their actions. Names and pictures on cubbies, toy shelves, and learning centers help the children to remember the locations of their clothes, toys, and learning activities. Preferential seating of target youngsters in large groups can increase their attention spans. Jones (1996) suggests that they be placed in the center of the semicircle of children so that the teacher can easily make eye contact and model appropriate behaviors. Directions such as for are projects should be given in small groups to sustain attention and lessen distractibility (Eddowes & Aldridge, 1993).

Some responses by teachers to challenging behaviors consist of the token economy, shaping, timeouts, avoidance of downtime, clear limits, and consequences, Talk It Over Places, and strategies to build self-esteem. In a token economy, children are given reinforcers in the form of tokens such as poker chips or cards for appropriate behaviors. The tokens are later exchanged for concrete reinforcer such as toys, games, food, and favorite

activities. Shaping is the process of starting at the child's level and gradually encouraging closer and closer approximations of the target behavior until mastery is achieved. For example, if the goal for Susan is to sit at circle time for 5 minutes, the teacher sets the timer first for 2 minutes and then reinforces Susan for sitting during this time. Then the teacher gradually works with Susan until the goal of sitting for 5 minutes is reached (Lerner, 1997; Cook, Tessier & Klein, 1996).

Timeout is a procedure in which the consequences for misbehavior is the removal of the child from class activities to an isolated area for a limited amount of time. Timeouts should be brief and used cautiously as they only demonstrate what not to do to the child instead of modeling appropriate behaviors. Avoidance of downtime is the process of decreasing waiting time for children while their peers complete their activities. Too much downtime leads to boredom and misbehaviors. Developmentally appropriate limits and consequences should be clearly stated and enforced. The use of a Talk It Over Place (Spodek & Saracho, 1994) is useful when children have conflicts. The Talk It Over Place is a designated area of the classroom in which the preschool teacher sends children, who are fighting, to talk over their conflicts and find solutions. The teacher intervenes only when necessary. Strategies that build self esteem in preschoolers with PLD are: to teach new skills at the child's developmental level and praise each step of progress; to reinforce the children for appropriate behaviors or to "catch them being good"; and to focus on demonstrated effort as opposed to only stressing mastery of a skill (Wood, 1998; McEvoy & Odom, 1996).

Interventions for Speech and Language Delays

The preschool teacher can follow the guidance of the speech and language therapist when planning specific interventions. Some general recommendations for the classroom teacher are the use of naturalistic language teaching techniques. The characteristics of naturalistic teaching are: children initiate the topics of conversation while the teacher follows their leads

and interests; the language teaching takes place in the daily activities and routines; and the children are not removed to isolated areas for therapy. Examples of naturalistic teaching: expansions, expatiation, parallel talk, and self-talk (Lerner, Lowenthal & Egan, 1998).

Expansions are useful for children who can talk but not in complete sentences. The adults listen to the preschoolers' words, try to understand the main ideas, and then repeat the words in more complete but simple sentences (Donahue-Kilburg, 1992). The following conversation illustrates expansion:

Child: "Go." (points to door)
Adult: "Go out?"
Child: "Go out." (shakes head to indicate yes)
Adult: "You want to go out now?"
Child: "Go out."
Adult: "Go out now."
Child: "Go out now."

Expatiation is accomplished by following the child's lead in conversation. The caretaker focuses on what the preschooler says and adds new information. An example of expatiation is:

Child: "Boy eats."
Adult: "Yes, he's eating cookies."

Parallel talk is the strategy of describing what children are doing as they play nearby (Lerner, Lowenthal & Egan, 1998). This technique provides preschoolers a model of simple but more complete syntax. For example, while the children are building block structures, the teacher may say, "Look at the buildings, I like the buildings, the buildings are tall." Self talk is a technique in which the teachers model more complex language while describing their own actions. For example, when a teacher is cutting paper, she says, "I have to cut paper, cut, cut the paper, now the paper is cut."

Interventions in the Auditory and Visual Processing Areas

Interventions in the auditory processing area includes: strategies for giving directions, listening skills, and sound discrimination games. Directions need to be simple and given one at a time. To encourage listening skills, caretakers should speak slowly and distinctly using natural intonation patterns. The sentences need to be short and contain the amount of words appropriate for the child's developmental level and interests. Visual aides such as pictures help the preschooler to attend to the conversation. Practice in sound discrimination can be accomplished through playing listening games. An example is listening to and saying sounds that rhyme from finger plays, songs, and stories. In the visual processing area, some interventions are: playing with manipulatives such as puzzles, blocks, and pegboards; sorting objects by size, color, and shape; and matching toys such as dolls, dishes, and dress up clothes in the dramatic play center (Miller, 1996).

Interventions for Cognitive Delays

For preschoolers who have PLD and specific cognitive delays, the following strategies are suggested: new content and concepts should be presented using multisensory techniques (visual, auditory, and tactile). The use of multiple senses assists preschoolers to understand concepts. Concrete concepts are easier to comprehend in comparison to more abstract ones. Repeated practice in different situations and over learning can be used to further generalization of a skill. Task analysis, in which the skill is broken into small steps for instruction, helps to ensure success. Praise is important for any step of progress, no matter how tiny (Cook, Tessier & Klein, 1996; Lerner, Lowenthal & Egan, 1998).

Interventions for Motor Delays and Adaptive Behaviors

When young children with PLD exhibit motor delays early childhood educators can assist them by following the specific guidance of occupational and physical therapists. Some general recommendations in the gross motor area for the inclusive class teacher are: the use

of playground games to develop effective and smoother body movements, playing animal walk games at music time, in which the preschoolers imitate movements of animals, and practicing throwing and catching skills by using a variety of objects such as balloons, balls, frisbies, and bean bags (Lerner, 1997). Preschool fine motor and adaptive/self help activities which improve eye-hand coordination include the drawing, painting, cutting, and coloring of are projects, playing with manipulatives, and practicing self help/adaptive skills by buttoning, zipping, dressing, and undressing when the children enter and exit the classroom. Snack times, in which the youngsters eat with utensils and pour juice from pitchers, have dual purposes of practicing fine motor and adaptive behaviors at the same times (Horn, 1993).

Social-Emotional Delays

Youngsters with delays in the emotional domain can benefit from the suggestions given previously that build self esteem and assist children to regulate their emotions. In the social domain, preschoolers with PLD often have difficulties in their play skills and in making friends (Margalit, 1998). They find it difficult to initiate play, to join a play group, and be accepted by peers. Some strategies that can assist them are: group affection activities, correspondence training, and peer mediated interventions (Lerner, Lowenthal & Egan, 1998). Affection activities are defined by McEvoy, Twardosz, and Bishop (1990) as "typical preschool games, songs, and activities that have been modified to include varying types of affectionate responses"(p. 161). These activities are called "affectionate" because teacher prompts are provided which lead to affectionate, friendly responses of the youngsters to one another. An example is the typical preschool song, "If you're Happy and You Know It." Instead of the usual response of "Clap your hands", the children may be asked to hug or smile at each other. According to some research studies, the affectionate responses appear to generalize from the training sessions to other periods of the day as well (Niemeyer & McEvoy, 1990).

Correspondence training is another strategy which can promote social skills in children with PLD and other special needs. In most applications of this technique, children are asked about what they will do and then are reinforced for doing it. For example, if the preschooler says, "I'll play with Nancy", and then does it, the teacher reinforces her with verbal praise, favorite activities, or with tangible reinforcements such as food or toys. The child is reinforced for a correspondence between her verbal and non-verbal behaviors. Because of its simplicity, correspondence training is viewed as a desirable strategy to further social skills (Bailey & Wolery, 1992; Guralnick & Neville, 1997).

Peer-mediated interventions involve the assistance of typically developing youngsters to encourage social interactions and play among children at-risk. A frequent use of this strategy focuses on peer initiations. When using this procedure, the teacher trains a typically functioning peer to specifically direct social initiations, such as invitations to play, to a target child. The peer is encouraged to persist in these interactions as much as possible. For example, the preschooler is taught to offer a favorite toy to the child at-risk and keep offering it until she responds to the overtures. The teachers play important roles in these procedures because not only do they need to train the children without special needs but also prompt and reinforce them for their successful interaction (McEvoy, Odom & McConnell, 1992). Qualities the teachers can use when choosing appropriate trainers are: the popularity of the children, their abilities to follow directions, and their desires to participate (Odom, Ostrosky, Cronin & Keetz, 1992).

Conclusion

In this article, the identification and characteristics of preschoolers with PLD are described. Then, functional assessment measures which can be used by busy teachers of inclusive early childhood programs are discussed. Last, suggestions for classroom interventions are presented which can be provided within daily routines. The goal of

successful inclusion of children with PLD is easier to attain when preschool teachers are able to incorporate methods of identification, assessments, and interventions in the typical activities of their programs.

References

Achenbach, T.M., Howell, T., McConaughy, S.H., & Stanger, C. (1995). Six-year predictors of problems in a national sample of children and youth: Signs of disturbance. Journal of the American Academy of Child and Adolescent Psychiatry, 34, 488-498.

Achenbach, T.M., & McConaughy, S.H. (1996). Empirically based assessment of child and adolescent psychopathology: Practical application. Thousand Oaks, CA: Sage.

American Psychiatric Association (1993). Diagnostic and statistical manual of mental disorders, (4th ed.) (DSM IV). Washington, D.C.

Arter, J.A., & Spandel, V. (1991). Using portfolios of student work in instruction and assessment. Portland, OR: Northeast Regional Educational Laboratory.

Bagnoto, S.J., Neisworth, J.T., & Munson, S.M. (1997). Linking assessment and early intervention. Baltimore: Brookes.

Bailey, D.B., & Wolery, M. (1992). Teaching infants and preschoolers with disabilities. New York: Macmillan.

Barkley, R.A. (1995). Taking charge of ADHD. New York, NY: Guilford Press.

Bricker, D., & Waddell, M. (Eds.) (1996). Assessment, evaluation, and programming system for infant and children: Vol. 4. AEPS curriculum for three to six years. Baltimore: Paul H. Brookes.

Brigance, A.H. (1991). Brigance Diagnostic Inventory of Early Development-Revised (BDIED-R). N. Billerica, MA: Curriculum Associates.

Brophy, J.E., & Good, T.I. (1986). Teacher behavior and student achievement. In C.C. Wittrock (Ed.), Handbook of research on teaching (3rd ed., pp. 328-375). New York: Macmillian.

Cook, R.E., Tessier, A., & Klein, M.D. (1996). Adapting early childhood curricula for children in inclusive settings. Englewood Cliffs, NJ: Macmillan.

Dodge, D.T., & Colker, L. (1992). Creative curriculum for early childhood. Washington, D.C.: Teaching Strategies.

Donahue-Kilburg, G. (1992). Family-centered intervention for communication disorders. Gaithersburg, MD: Aspen.

Eddowes, E.A., & Aldridge, J. (1990). Hyperactive or "activity hyper": Helping young children attend in appropriate environments. Day Care and Early Education, Summer,

1990, pp. 29-32.

Federal Register (1977, Thursday, December 29), (pp. 65082-65985). Washington, D.C.

Green, C. (1996). ADHD in the under-fives-survival psychology. C.H.A.D.D. Eighth Annual Conference, November 14-16, 1996. Chicago, IL. Presenter Handouts, pp. 66-71.

Greenspan, S.I., & Meisels, S.J. (1996).New visions of assessment. In S.J. Meisels and E. Fenichel (Eds.), New visions for the developmental assessment of infants and young children, (pp. 11-26). Washington, D.C.: Zero to Three: National Center for Infants, Toddlers, and Families.

Guralnick, M.J., & Neville, B. (1997). Designing early intervention programs to promote children's social competence. In M. Guralnick (Ed.), The effectiveness of early intervention (pp. 579-610). Baltimore: Brookes.

Hohnson-Martin, N.M., Attermeir, S.N., & Hacker, B.J. (1990). The Carolina Curriculum for Preschoolers with Special Needs. Baltimore: Paul H. Brookes.

Horn, E.M. (1993). In DEC Task Force on Recommended Practices (Ed.), DEC recommended practices: Indicators of quality in programs for infants and young children with special needs and their families, (pp. 84-89). Reston, VA: Council for Exceptional Children.

Howard, V.F., Williams, B.F., Port, P.D., & Lepper, C. (1997). Very young children with special needs. Columbus, OH: Merrill.

Ingersol, B. (1995). ADD: Not just another fad. Attention, 2, 17-19.

Jones, C.B. (1996). ADD in early childhood. C.H.A.D.D. Eighth Annual Conference, November 14-16, 1996. Chicago, IL: Presenter Handouts, pp. 194-199.

Jones, E.D., Southern, W.T., & Brigham, F.J. (1998). Curriculum-based assessment. Intervention in School and Clinic, 33, 219-226.

Lerner, J. (1997). Learning disabilities: Theories, diagnosis, and teaching strategies. Boston: Houghton Mifflin.

Lerner, J., Lowenthal, B., & Egan R. (1998). Preschool children with special needs: Children at-risk, children with disabilities. Boston: Allyn and Bacon.

Lerner, J., Lowenthal, B., & Lerner, S. (1995). Attention deficit disorders. Pacific Grove, CA: Brooks/Cole.

Linder, T.W. (1993). Transdisciplinary play-based assessment: A functional approach to working with young children. (Rev. ed.), Baltimore: Paul H. Brookes.

Lowenthal, B. (1996). Precursors of learning disabilities at preschool age. LDH

Newsbriefs, March-April, 3-4.

Lyon, G.R. (1996). Learning disabilities. The Future of Children, 6(1), 54-76.

Margalit, M. (1998). Loneliness and coherence among preschool children with learning disabilities. Journal of Learning Disabilities, 31, pp. 173-180.

McEvoy, M.A., & Odom, S.L. (1996). Strategies for promoting social interaction and emotional development of infants and young children with disabilities. In S.L. Odom and M.E. McLean (Eds.), Early intervention/early childhood special education: Recommended practices. Austin, TX: Pro-ED.

McEvoy, M.A., Odom, S.L., & McConnell, S.R. (1992). Peer social competence intervention for young children with disabilities. In S.L. Odom, S.R. McConnell, and M.A. McEvoy (Eds.), Social competence of young children with disabilities (pp. 37-64), Baltimore: Paul H. Brookes.

McEvoy, M.A., Twardosz, S , & Bishop, N. (1990). Affection activities: Procedures for encouraging young children with handicaps to interact with their peers. Education and Treatment of Children, 13, 159-167.

Meisels, S.J. (1994). Designing meaningful measurement for early childhood. In B.L. Mallory and R.S. New (Eds.), Diversity and developmentally appropriate practices: Challenges for early childhood education (pp. 202-222). New York: Teachers College Press.

Merzenick, M.M., Jenkins, W.M., & Tallal, P. (1996). Temporal processing deficits of language-learning impaired children ameliorated by training. Science, 271(5245), 77-80.

Miller, R. (1996). The developmentally appropriate inclusive classroom in early education. Albany, NY: Delmar.

Neilesen, S., van den Pol, R., Guidry, J., Keeley, E., & Honzel, R. (1994). On track: A comprehensive system for early childhood intervention. Longmont, CO: Sopris West.

Niemeyer, J.A., & McEvoy, M.A. (1990). Affection activities: Procedures for teaching young children at-risk for abuse to interact. Paper presented at the annual conference of the Division for Early Childhood, Albuquerque, NM.

Odom, S.L., Ostrosky, M., Cronin, P., & Keetz, A. (1992). Experimental analysis of a comprehensive intervention to promote social interactions of young children with and without disabilities: Treatment and induced generalization effects. Manuscript submitted for publication.

Smith, C.R. (1994). Learning disabilities: The interaction of learner, task, and setting. Boston: Allyn and Bacon.

Spodek, B., & Sarcho, O.N. (1994). Dealing with individual differences in the classroom. New York: Longman.

Umansky, W., & Hooper, S.R. (1998). Young children with special needs. Columbus, OH: Prentice-Hall.

VORT Corporation. (1995). HELP for preschoolers. Palo Alto, CA: Author.

Wetherby, A.M., & Prigant, B.M. (1993). Communication and Symbolic Behavior Scales(CSBS), normed edition. Chicago: Riverside.

Zentall, S.S. (1993). Research on the educational implications of attention deficit hyperactivity disorder. Exceptional Children, 60(2), 142-153.